

Analytics • Statistical Graphics • Enough Data • SQL • PROC REPORT • ODS
Data Engineering & Exploration • Debugging • SAS® to Excel • Data Visualization
For SAS Users from Illinois, Wisconsin, and Anywhere in the North Central USA
Wisconsin Illinois SAS Users Conference on June 25, 2014
At the Woman's Club of Wisconsin in Milwaukee

- ~ Learn from SAS experts and SAS users just like you in parallel sessions on SAS and SAS Analytics
- ~ Network with fellow SAS users (including at the post-conference social)
- ~ See SAS demos and get in-depth questions answered
- ~ Meet **Andrea Littleton**, our Liaison on SAS Institute's user event support team, who will be visiting to see what our events are like. We've been doing them for SAS users in the North Central USA since 1986.

What to Expect

Kirk Lafler will provide tutorials on PROC SQL and debugging SAS programs, as well as offer for-fee training. **Lisa Fine** will show how to create complementary reports and highly detailed reports that are eye-friendly and insight-facilitating. **Chevell Parker** from SAS will show how to get the most out of the Output Delivery System for fantastic reporting. There will be two SAS Institute presentations by **Charu Shankar** to help you understand, explore, and manipulate your data with Base SAS. **Patricia Berglund** will provide a primer on analysis of survey data and a presentation on enhanced data analysis with statistical graphics. **Deanna Schreiber-Gregory** will present papers on alternative research methods to investigate youth mental health and risky behavior. **Doug Thompson** will cover predictive modeling using SAS/STAT®. **LeRoy Bessler** will share his 16 ways to draw better pictures (i.e., graphs). Proceedings-Only content will include all the current ways to do SAS-to-Excel reporting and a paper on effective communication with color. In the **SAS Demo Room**, you can have one-on-one Q&A time with speakers, and see **Chevell Parker's** demonstrations of ODS to PowerPoint and of a forthcoming complete ODS Excel capability. Each attendee will receive several SAS Institute tip sheets for graphics and ODS. If you want to know how much is "Enough Data", or what is "Data Engineering" as opposed to "Data Science", you must come to the conference.

Proceedings/Tools - Conference slides/papers, a selection of other slides/papers, code tools, and guided links to resources at SAS and around the world are provided for attendees.

SAS Books – Books by three speaker-authors, and books with a tie-in to conference content, will be available for examination. You will be able to order them at a 20% discount and with free shipping. Two decades of SUGI Proceedings as well as several donated SAS books and manuals will be available at a silent auction.

Conference admission – **Online registration or mail-in pre-payment must be received no later than June 18.** We accept credit cards, personal check, company check, or money order, but no purchase orders. The fee includes admission, Conference Proceedings & Tools, continental breakfast, lunch, and beverages. **REGISTER EARLY. Space is limited. Registration information is on the last page of this brochure.**

Conference Site, etc. – There is free parking. See the second to last page for map and overnight accommodations.

Sponsors – We thank SAS, Experis, the Kennesaw State University Online Certificate in Applied Statistics using SAS, the Oklahoma State University Spears School of Business, and the MidWest SAS Users Group for sponsorship and support! For how they can help you with your SAS-related needs, please see their web sites www.sas.com, www.Experis.com, math.kennesaw.edu/academics/certificate/appl-stat/index.html, analytics.okstate.edu, and www.mwsug.org.



We look forward to seeing you at the conference.

Craig Wildeman, Laura MacBride, Michael G. Wilson, David Bruckner, and LeRoy Bessler
Your WIILSU Conference Team ~ www.wiilsu.org

For Questions about Registration: David or Craig at registrar@wiilsu.org or 920-457-4441
For Questions about the Conference: [Le Roy Bessler@wi.rr.com](mailto:LeRoy.Bessler@wi.rr.com) or 262-512-1729

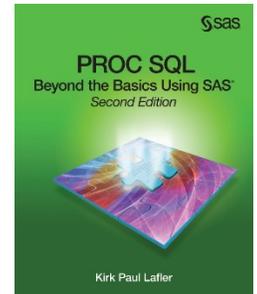
Speakers Who Are SAS Press Authors



Kirk Paul Lafler is consultant and founder of Software Intelligence Corporation and has been programming in SAS since 1979. He is a SAS Certified Professional, SAS Institute Alliance Member (1996 – 2002), sasCommunity.org emeritus advisory board member, and provider of IT consulting services and training to SAS users around the world. He is author of PROC SQL: Beyond the Basics Using SAS, Second Ed. and other books, has written hundreds of SAS papers, is a frequent invited speaker at SAS conferences, and has received 23 “Best” awards for presentations.

PROC SQL: Beyond the Basics Using SAS, Second Edition

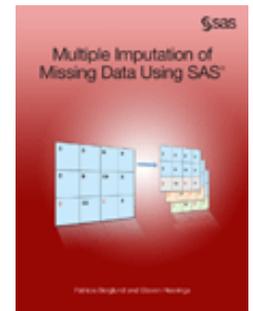
An example-driven guide that helps readers master the language of PROC SQL, this book is packed with analysis and examples illustrating an assortment of PROC SQL options, statements, and clauses. The Second Edition explores new and powerful features in SAS 9.3, and includes such topics as: adding data to a table with a SET clause; bulk loading data from Microsoft Excel; distinguishing between DATA step merges and PROC SQL joins; rules for designing indexes; cardinality and index selectivity; and demystifying join algorithms. It also features an expanded discussion of CASE expressions, and new sections on complex query applications, and grouping and performance.



Patricia Berglund is a Senior Research Associate in the Survey Methodology Program at the University of Michigan Institute for Social Research (ISR). She has extensive experience in the use of SAS for data management and analysis. She is a faculty member in the ISR's Summer Institute in Survey Research Techniques and also directs the ISR's SAS training programs. Berglund also teaches a SAS Business Knowledge Series class titled, "Imputation Techniques in SAS." Her primary research interests are mental health, youth substance issues, and survey methodology.

Multiple Imputation of Missing Data Using SAS

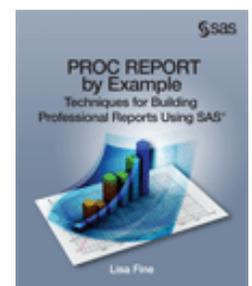
This book includes both theoretical background and solutions for those working with incomplete data sets. It offers instruction on the use of SAS for multiple imputation and provides examples that use a variety of public release data sets. The book guides analysts through evaluation of missing data patterns, choice of an imputation method, execution of the process, and interpretation of results. Topics include how to deal with missing data problems in a statistically appropriate manner, how to intelligently select an imputation method, how to incorporate the uncertainty introduced by the imputation process, and how to incorporate the complex sample design (if appropriate) through use of the SAS SURVEY procedures.



Lisa Fine is a Senior Manager of Clinical & Statistical Programming at United BioSource Corporation. She has more than 15 years of experience in SAS with a focus on data verification and reporting in Pharmaceutical Research and Marketing, using DATA step processing and a variety of procedures. She graduated from Loyola University in Chicago with an MA in Research Methodology from the School of Counseling and Education. Lisa is a certified SAS Base Programmer for SAS 9, SAS Advanced Programmer for SAS 9, and SAS Certified Clinical Trials Programmer Using SAS 9.

PROC REPORT by Example: Techniques for Building Professional Reports Using SAS

This book provides real-world examples using PROC REPORT to create a wide variety of professional reports. Written from the point of view of the programmer who produces the reports, this book explains and illustrates creative techniques used to achieve the desired results. Each chapter focuses on a different concrete example, shows an image of the final report, and then takes you through the process of creating that report. The book clarifies solutions to common, everyday programming challenges and typical daily tasks that programmers encounter.



Presentation Abstracts and Information about Speakers & Volunteers

Investigate Your Data with 4 Powerful SAS Tools

Charu Shankar, SAS Institute

This presentation will teach you how to use your existing SAS tools—Base SAS, PROC SQL, PERL language elements in Base SAS, and the SAS Macro Language—to help you manipulate and investigate your data. Learn to leverage these powerful capabilities to check your data with simple yet elegant techniques like Boolean logic in PROC SQL, operators such as the SOUNDS LIKE operator in the DATA or PROC step, and functions like the SCAN function in the DATA step. Find out how to efficiently check of your data with PERL regular expressions. Last but not least, see how the amazing marriage between PROC SQL and SAS Macro Language enables you to store data in a macro variable that you can retrieve over and over again in subsequent processing.

Charu Shankar has been a Technical Training Specialist with SAS since 2007. Before SAS, Charu worked at UNESCO, Rotman School of Management, and other places. She started her career as a programmer. At SAS, she teaches the SAS programming language, SQL, SAS Enterprise Guide™, and BI. She enjoys teaching by engaging her students with logic, visuals, and analogies to spark critical reasoning. Skilled in customer needs analysis, Charu frequently interviews clients to recommend the right SAS training to help meet their needs. She is a frequent blogger for the [SAS Training Post](#). In her spare time she is a singer, yoga teacher, and a [food blogger](#).

16 Ways To Draw Better Pictures:

Six Laws of Graphic Communication Effectiveness, Nine Good Example Graphs, and One Bad

LeRoy Bessler, Ph.D., Bessler Consulting and Research

Graphic software users face Options Over-Choice, and defaults designed to easily get a result, but not necessarily the best result. Come learn how to use communication-effective data visualization to inform and influence. The examples use SAS tools (traditional SAS/GRAPH® and its G procedures, or newer SAS ODS Graphics and its SG procedures available free in Base SAS), but the design principles are software independent, and apply to whatever is **your** tool for data visualization. All attendees will receive a printed tip sheet for Bessler's Principles for Communication-Effective Graphic Design (a.k.a., Principia Graphika, which is published in English, not Latin).

Dr. LeRoy Bessler has presented at conferences in the US and Europe, on effective visual communication (using graphs, tables, web pages, or color), highly formatted Excel reporting from SAS, his custom SAS tools for server administrators, server users, and server managers, and Software-Intelligent Application Development methods to maximize Reliability, Reusability, Maintainability, Extendibility, and Flexibility, etc. His SAS experience includes application development and supporting users, servers, software, and data as a SAS administrator.

SAS Section

Creating Complementary Reports: Giving Them More Ways to See and Use the Data

Lisa Fine, United BioSource Corporation

As programmers, we're often asked to provide a series of reports that will be used in conjunction with one another instead of simply providing one report to be used in isolation. An example of this is a request to provide a summary report accompanied by a detailed report so that the source of the summary information is known and can be verified. There are several steps we can implement that will allow for accuracy and ease of use for the reader when analyzing multiple reports. These include a consistent report template, consistency of data definitions across reports, consistent labels so the end user can easily match items across the reports, footnote references clarifying which reports correspond to each other, and quality checks to ensure that numbers/statistics correspond across reports. This presentation takes the user through the steps of creating a Setup program to accomplish aspects that are common to both Detail and Summary reports, creating the unique reports, and final checks to ensure consistency across reports.

Get the Most out of the Output Delivery System for Fantastic Reporting

Chevell Parker, SAS Institute

This presentation will show you how to tap more of the power of the Output Delivery System by uncovering some of its underappreciated capabilities. In the process of uncovering these hidden gems, we will examine several ODS destinations and use various techniques to get the most out of those destinations. These tips will demonstrate how you can take full advantage of the features provided by ODS to deliver fantastic reporting directly from SAS.

Chevell Parker is a consultant in the Foundation SAS group in the Technical Support Division. His main support areas include the Output Delivery System and XML technologies. Chevell joined SAS Institute in 1993.

Five Little Known, But Highly Valuable and Widely Useable, PROC SQL Programming Techniques

Kirk Paul Lafler, Software Intelligence Corporation

The SQL Procedure contains a number of powerful and elegant language features for SQL users. This presentation highlights five little known, but highly valuable and widely usable, features that will help users harness the power of the SQL procedure. Attendees learn how the SQL procedure can be used to summarize down rows and across columns; identify and capture FIRST, LAST, and Between rows of data within BY-groups; construct and search the contents of a value-list macro variable for a specific value; apply rules to safeguard a table from being populated with “unsafe” data; and capture insightful and useful information during the testing and debugging phases to better understand query processing and the join algorithm that was selected by the SQL optimizer.

Formatting Highly Detailed Reports: Eye-Friendly, Insight-Facilitating

Lisa Fine, United BioSource Corporation

The goals for formatting highly detailed reports are those that make the report easier on the eye. This presentation will follow a step-by-step process of applying formatting modifications that facilitate insight into report results and will include information about making key items stand out with bold font, borders, underlines, and color, inserting symbols that aid user understanding, and adding white space between rows and columns.

Data and Metadata Exploration Using SAS

Charu Shankar, SAS Institute

80% of our time as data workers is spent on eliminating incorrect data, scrubbing data to get it into shape, and knowing our data intimately. Then comes the 20% of our time spent on the cosmetic side of business intelligence, i.e., the fancy and polished reports that are delivered. Yet a majority of data workers don't spend this 80% time. The result—flawed data resulting in flawed results. You'll probably say, "I know I'm supposed to know my data, but I don't." No problem. Come learn the many different, interesting, and efficient ways to understand your data (metadata included) using SAS. No manual work is required. The result—accurate reporting with your data, a business that is able forecast growth correctly, and a very happy business unit or manager.

SAS Debugging 101

Kirk Paul Lafler, Software Intelligence Corporation

SAS users are generally surprised to discover that their programs contain bugs. In fact, when asked, users will emphatically stand by their programs and logic, saying they are bug free. However, experience, along with the realities of writing code, says otherwise. Bugs in software can appear anywhere, whether accidentally built into the software by developers, or introduced by programmers when writing code. No matter where the origins of a bug occur, the one thing that all SAS users know is that interpreting SAS program errors and warnings and finding the source of program malfunctions can be a daunting, and humbling, task. Attendees at this presentation will learn essential information about the types of SAS bugs that can be encountered, how bugs are created or caused, the symptoms of bugs, and a number of techniques that can be used to better understand, identify, and repair program code, permitting it to work as intended.

SAS Analytics Section

Analysis of Survey Data Using the SAS SURVEY Procedures: A Primer

Patricia Berglund, Institute for Social Research, University of Michigan

This presentation provides an overview of the SAS SURVEY procedures along with analytic applications using PROC SURVEYMEANS, PROC SURVEYFREQ, PROC SURVEYREG, PROC SURVEYLOGISTIC and PROC SURVEYPHREG. Five common analytic tasks, including a means analysis with a subpopulation of interest, frequency tables/cross-tabulations, linear regression, logistic regression, and a survival model using the Proportion Hazards method, are demonstrated. The applications also cover use of SURVEY procedure options for hypothesis testing, use of both Taylor Series Linearization and Repeated Replication methods for variance estimation, and subpopulation analyses. In addition, results derived from procedures assuming a simple random sample are compared to results from the SURVEY procedures. These comparisons highlight how the SURVEY procedures enable correct incorporation of the sample design features of survey data sets. They also illustrate how analysts who ignore the design features of survey data may formulate incorrect conclusions regarding their analyses.

Patricia Berglund is a Senior Research Associate in the Survey Methodology Program at the University of Michigan Institute for Social Research (ISR). She has extensive experience in the use of SAS for data management and analysis. She is a faculty member in the ISR's Summer Institute in Survey Research Techniques and also directs the ISR's SAS training programs. Berglund also teaches a SAS Business Knowledge Series class titled "Imputation Techniques in SAS". Her primary research interests are mental health, youth substance issues, and survey methodology.

Comparing Concatenation and Individual Analyses When Exploring Survey Data

Deanna Schreiber-Gregory, North Dakota State University

This paper compares and contrasts the combining of multiple separately administered sets of survey data with analyzing these sets of data separately. In particular, this paper addresses whether combining the different sets of data would negatively influence the quality of the statistics found and what advantages analyzing these data sets separately would provide. The study looks at recent health trends and behavior analyses of youth in America. Data used in this analysis was provided by the Center for Disease Control and Prevention and gathered using the Youth Risk Behavior Surveillance System (YRBSS). A series of logistic regression analyses were then performed using the risk behavior and demographic variables as potential contributing factors to each of the mental health variables. Mental health variables included disordered eating and depression/suicidal ideation data while the risk behavior variables included smoking, consumption of alcohol and drugs, violence, vehicle safety, and sexual behavior data. Results included reporting differences between the years of 1991 and 2011. Data was analyzed using SAS 9.3.

Deanna Schreiber-Gregory is a recent graduate of NDSU and an alumna of the McNair, Psi Chi, and NSCS scholar programs. Deanna has a double bachelors in psychology and statistics and continues to be actively involved with research on campus and at the Neuropsychiatric Research Institute. Deanna has two published papers in eating disorder research and five years' experience working directly with vulnerable and at risk populations. She has presented her work at eight SAS conferences since 2011, winning scholarships to all but one of them.

Simple and Powerful: Predictive Modeling using SAS/STAT

Doug Thompson, Ph.D., Blue Cross Blue Shield of IL, MT, NM, OK and TX

Predictive modeling is essential for cost-efficient operations in many industries, including healthcare, telecommunications, financial services, and insurance. Often, the goal of predictive modeling is to estimate the likelihood of specific events before they happen (e.g., avoidable hospital readmissions, product purchase, service retention, loan default), in order to be able to influence those events and achieve desirable outcomes. Perhaps because predictive modeling has become so ubiquitous and lucrative, a variety of predictive modeling tools have appeared in the marketplace. Some tools are extremely expensive and the return on investment is questionable. Fortunately, SAS/STAT offers a wide variety of predictive modeling capabilities at an affordable price. This presentation provides an overview of the predictive modeling capabilities of SAS/STAT, illustrated via examples. An example of building and evaluating a predictive model from start to finish using SAS/STAT is presented.

Doug Thompson, Ph.D., is Executive Director, Enterprise Analytics for Blue Cross Blue Shield of IL, MT, NM, OK and TX, where he leads a team of analysts conducting program evaluations, predictive modeling, and other analytic studies. Dr. Thompson has 15 years of experience using Base SAS, SAS/STAT, SAS/ETS® and SAS Enterprise Miner™. He has used SAS for statistical analyses in more than 45 peer-reviewed publications.

Enhanced Data Analysis using SAS ODS Graphics and Statistical Graphics

Patricia Berglund, Institute For Social Research, University of Michigan

This paper presents practical examples of enhanced data analysis through use of ODS Graphics and the Statistical Graphics (SG) procedures. SAS 9.3 ODS Graphics options and selected SG procedures are demonstrated with a variety of analytic techniques, including examination of variable distributions and common regression methods. Procedures such as PROC MEANS, PROC SURVEYMEANS, PROC UNIVARIATE, PROC REG, PROC LOGISTIC, and PROC SURVEYLOGISTIC are used with accompanying ODS Graphics and SG tools for enhanced analysis. The analysis applications include unweighted and weighted analyses and, where appropriate, SAS SURVEY procedures for analysis of data derived from a complex sample design. The techniques presented here can be used on any operating system, and are intended for an intermediate level audience.

Using a Factor Analysis When Exploring Survey Data

Deanna Schreiber-Gregory, North Dakota State University

This paper looks at using a factor analysis to identify and define latent mental health and risk behavior variables in a survey data set. The study looks at recent health trends and behavior analyses of youth in America. Data used was provided by the Center for Disease Control and Prevention and gathered using the Youth Risk Behavior Surveillance System (YRBSS). A series of logistic regression analyses were then performed using the risk behavior and demographic variables as potential contributing factors to each of the mental health variables. Mental health variables included disordered eating and depression/suicidal ideation data while the risk behavior variables included smoking, consumption of alcohol and drugs, violence, vehicle safety, and sexual behavior data. Risks and benefits of using a factor analysis with logistic regression in social science research will be discussed in depth. Results included reporting differences between the years of 1991 and 2011. Data was analyzed using SAS 9.3.

Proceedings-Only Content

All the Ways To Create Reports with SAS That Can Be Opened and Formatted with Excel

LeRoy Bessler, Ph.D., Bessler Consulting and Research

This collection of slide presentations, papers, and tools compares five ways of Excel Reporting from SAS: HTML, ExcelXP, MSOffice2K_x, TableEditor, and Dynamic Data Exchange (DDE). For DDE, the most powerful option, this package of resources includes a toolkit of sixty macros and twenty-six sample programs (with comments), and supporting files.

Using Color to Communicate, Not to Decorate

LeRoy Bessler, Ph.D., Bessler Consulting and Research

The principles of effective use of color to communicate, rather than decorate, are software-independent, but this tutorial, for any data visualization or reporting situation, includes tidbits specific to SAS, Excel, or the web. When it comes to the pitfalls of, and best practices for, using color, you don't know what you don't know. This tutorial can help you paint a better picture.

Conference Team

Craig Wildeman and **David Bruckner**, from Kohler Co., help with registration and email. Craig is a Senior Systems Project Leader in the Quality Department of the Cast Iron Division. David is a Systems Project Leader for Sales Operations - K & B Americas. **Laura MacBride** handles conference communications. She is a Research Analyst in the Office of Institutional Research and Analysis at Marquette University. **Michael G. Wilson**, an independent biostatistician, is SAS Analytics Section Chair. **LeRoy Bessler** is an independent SAS consultant, and serves as conference coordinator and artistic director.

Pre-Conference and Post-Conference Training by Kirk Paul Lafler

Register for SAS training, located at the conference site (Woman's Club of Wisconsin) on June 24, 26, or 27. Registration fees for training are as follows: \$150 per course with conference registration, or \$200 per course without conference registration.

NOTE: On training days, the Club is also in use by its members. On those days, Business or Business Casual attire are required. During the Summer, blue jeans are acceptable attire.

Course Abstracts and Schedule:

Programming Essentials Using SAS Enterprise Guide

Tuesday, June 24: 8:00 am – 12:00 pm, \$150 (\$200 without conference registration)

This course is designed to teach the basics of the SAS System emphasizing the power of the graphical user interface (GUI) features found in SAS Enterprise Guide (EG). Acquire a working knowledge of the GUI front-end interface along with the built-in wizards to access and perform a variety of input data types; data transformations; reporting and analytical tasks; subset, order, group, and summarize data; join (or merge) tables together; export results to Excel, Word, HTML, and PDF; and organize, view and manage projects, code, and its application-generated flow diagrams visually.

Attendees learn how to use EG's GUI front-end interface to construct and execute programs using the SAS System; read and process text, ASCII, comma- and tab-delimited, and Excel data; format existing variables and create new calculated variables; create temporary and permanent SAS data sets; subset, order and group data; create detail, summary, tabular and statistical reports; perform conditional programming logic; manipulate numeric and character data; combine data using concatenation, match-merging (or joining) techniques; and manage SAS data sets and projects for added power and flexibility.

Intended Audience: SAS Programmers and End Users

Prerequisites: No previous SAS software experience required

Delivery Method: Instructor-led with code examples

Class Material: Course notes are provided

Advanced SAS Programming Techniques

Tuesday, June 24: 1:00 pm – 5:00 pm, \$150 (\$200 without conference registration)

SAS users who have acquired basic skills presented in a SAS Software Basics course and want to expand their programming knowledge in the DATA and PROC steps will want to attend this Advanced SAS Programming Techniques course. Attendees learn complex programming topics and techniques in the areas of data access, data manipulation, data management, data presentation, and more. Topics include intensive DATA step programming techniques such as reading data from MS-Excel spreadsheets; creating and using user-defined formats and functions; reshaping columns and rows of data with the TRANSPOSE procedure along with equivalent DATA step approaches; coding and using one-dimensional and multi-dimensional arrays and loops; using operators and modifiers to search data; and drill-down techniques.

Intended Audience: All SAS users

Prerequisites: Minimum 1-year Base SAS programming experience

Delivery Method: Instructor-led with code examples

Class Material: Course notes are provided

PROC SQL Programming: The Basics and Beyond

Thursday, June 26: 8:00 am – 12:00 pm, \$150 (\$200 without conference registration)

This course teaches SAS users core concepts and features about accessing data stored in relational database tables. Attendees learn how to use PROC SQL to access data stored in relational tables; accomplish essential programming tasks including retrieving, subsetting, ordering, and grouping data; construct logic scenarios with

case expressions; construct “virtual” tables known as views; explore one-to-one, one-to-many, and many-to-many data relationships; understand the similarities and differences between DATA step merges and joins; create complex queries using inner and outer join constructs as well as with set operators; use summary (statistical) functions to aggregate data; create new tables; produce “quality” looking output using PROC SQL options and Output Delivery System (ODS); interface PROC SQL with the macro facility to create single-value and multi-value (list) macro variables; and apply “select” query performance tuning techniques.

Intended Audience Level: All SAS and SQL users

Prerequisites: SAS Essentials course or 6-months SAS software experience

Delivery Method: Instructor-led with code examples

Class Material: Course notes are provided

Advanced PROC SQL Programming Concepts and Techniques

Thursday, June 26: 1:00 pm – 5:00 pm, \$150 (\$200 without conference registration)

This course teaches advanced PROC SQL concepts and techniques to exploit SQL as a programming language. Attendees learn how to use PROC SQL to explore and exploit the application of “virtual” tables known as views; explore rule-based and cost-based optimization strategies; examine the various join algorithms; explore the details associated with index rules and strategies; construct table validation rules using integrity constraints; and explore the various query performance tuning techniques.

Intended Audience: All SAS and SQL users

Prerequisites: Introductory SQL course, SAS Essentials course or 6-months SAS software experience

Delivery Method: Instructor-led with code examples

Class Material: Course notes are provided

Building Reusable Tools with SAS Macro Language

Friday, June 27: 8:00 am – 12:00 pm, \$150 (\$200 without conference registration)

The SAS Macro Language is a powerful feature for extending the capabilities of the SAS System. This course presents a collection of techniques for constructing reusable and effective macros tools. Attendees learn how to build functional macros that process statements containing SAS code; learn basic design principles in the development of reusable macro tools; create macros containing keyword and positional parameters; utilize defensive programming techniques; build a library of macro utility tools; interface the macro language with the SQL procedure; and develop efficient and portable macro language code.

Intended Audience: All SAS users

Prerequisites: Introduction to SAS Macro course or minimum 1-year SAS software experience

Delivery Method: Instructor-led with code examples

Class Material: Course notes are provided

Exploring SAS Hash Programming Techniques

Friday, June 27: 1:00 pm – 5:00 pm, \$150 (\$200 without conference registration)

Beginning in Version 9, SAS software supports a DATA step programming technique known as hash that can help improve the way table lookup, search, sort, and join operations are performed. This course explores what a hash object is, how it works, and the syntax required. Topics include how the hash object can be used to perform in-memory data sorts, search memory-resident data using a simple key to find a single value, use a hash object to reduce the number of steps in a program, allocate memory on demand, as well as more complex programming techniques that use a composite key to search for multiple values.

Intended Audience: All SAS users

Prerequisites: Minimum 1-year Base SAS programming experience

Delivery Method: Instructor-led with code examples

Class Material: Course notes are provided

Wisconsin Illinois SAS Users Conference Agenda – June 25, 2014

Woman's Club of Wisconsin, 813 E. Kilbourn Ave., Milwaukee, WI 53202, 414-276-5170

8:30 Registration Check-In

9:00 Welcome

LeRoy Bessler, Conference Coordinator

9:10 Investigate Your Data with 4 Powerful SAS Tools

Charu Shankar, SAS Institute

10:00 16 Ways To Draw Better Pictures:

Six Laws of Graphic Communication Effectiveness, Nine Good Example Graphs, and One Bad

LeRoy Bessler, Bessler Consulting and Research

10:25 Break

SAS SECTION (MAIN ROOM)

10:45 Creating Complementary Reports: Giving Them More Ways to See and Use the Data

Lisa Fine, United BioSource Corporation

11:10 Get the Most out of the Output Delivery System for Fantastic Reporting

Chevell Parker, SAS Institute

12:00 Lunch

1:00 Five Little Known, But Highly Valuable and Widely Useable, PROC SQL Programming Techniques

Kirk Paul Lafler, Software Intelligence Corporation

1:55 Formatting Highly Detailed Reports: Eye-Friendly, Insight-Facilitating

Lisa Fine, United BioSource Corporation

2:50 Break

3:00 Data and Metadata Exploration Using SAS

Charu Shankar, SAS Institute

3:55 SAS Debugging 101

Kirk Paul Lafler, Software Intelligence Corporation

SAS ANALYTICS SECTION (BREAKOUT ROOM)

10:45 Analysis of Survey Data Using the SAS SURVEY Procedures: A Primer

Patricia Berglund, Institute for Social Research, University of Michigan

12:00 Lunch

1:00 Comparing Concatenation and Individual Analyses When Exploring Survey Data

Deanna Schreiber-Gregory, North Dakota State University

1:55 Simple and Powerful: Predictive Modeling using SAS/STAT

Doug Thompson, Blue Cross Blue Shield of IL, MT, NM, OK and TX

2:50 Break

3:00 Enhanced Data Analysis using SAS ODS Graphics and Statistical Graphics

Patricia Berglund, Institute for Social Research, University of Michigan

3:55 Using a Factor Analysis When Exploring Survey Data

Deanna Schreiber-Gregory, North Dakota State University

4:45 Return to Main Room

SAS SECTION (MAIN ROOM)

4:45 Conference Closing

5:00 Post-Conference Networking Social

All Attendees, Volunteers, and Speakers who can stay

NOTE: Order of speakers above might need to change without notice.

Proceedings-Only Content

All the Ways To Create Reports with SAS That Can Be Opened and Formatted with Excel

LeRoy Bessler

Using Color to Communicate, Not to Decorate

LeRoy Bessler

Demo Room

Sponsor – will be present most of the day

Mindy Kiss, Experis

Gaining Competitive Advantage and Generating Success with Experis

Speakers and Authors – will be present during the times shown

10:45-11:05

LeRoy Bessler

Discussion Topics: Q&A & demos for Data Visualization with SAS and Excel Reporting with SAS

11:10-11:55

Charu Shankar

Discussion Topics: Q&A related to presentations

Lisa Fine

Discussion Topics: PROC REPORT

Book: PROC REPORT by Example: Techniques for Building Professional Reports Using SAS

Kirk Paul Lafler

Discussion Topics: Q&A related to presentations, DATA step programming, PROC SQL, SAS Enterprise Guide

Book: PROC SQL: Beyond the Basics Using SAS, Second Edition

12:00 Lunch

1:00-1:50

Patricia Berglund

Discussion Topic: Analysis of survey data using SAS SURVEY procedures, missing data, statistical graphics

Book: Multiple Imputation of Missing Data Using SAS

Lisa Fine

Discussion Topics: same as earlier

Chevell Parker

Discussion Topics: ODS Q&A, demos of SAS to PowerPoint and SAS to Excel

1:55-2:45

Deanna Schreiber-Gregory

Discussion Topics: Q&A related to presentations

Kirk Paul Lafler

Discussion Topics: same as earlier

Charu Shankar

Discussion Topics: same as earlier

2:50 Break

3:00-3:50

Doug Thompson

Discussion Topics: SAS/STAT, research design, data mining, predictive modeling

Chevell Parker

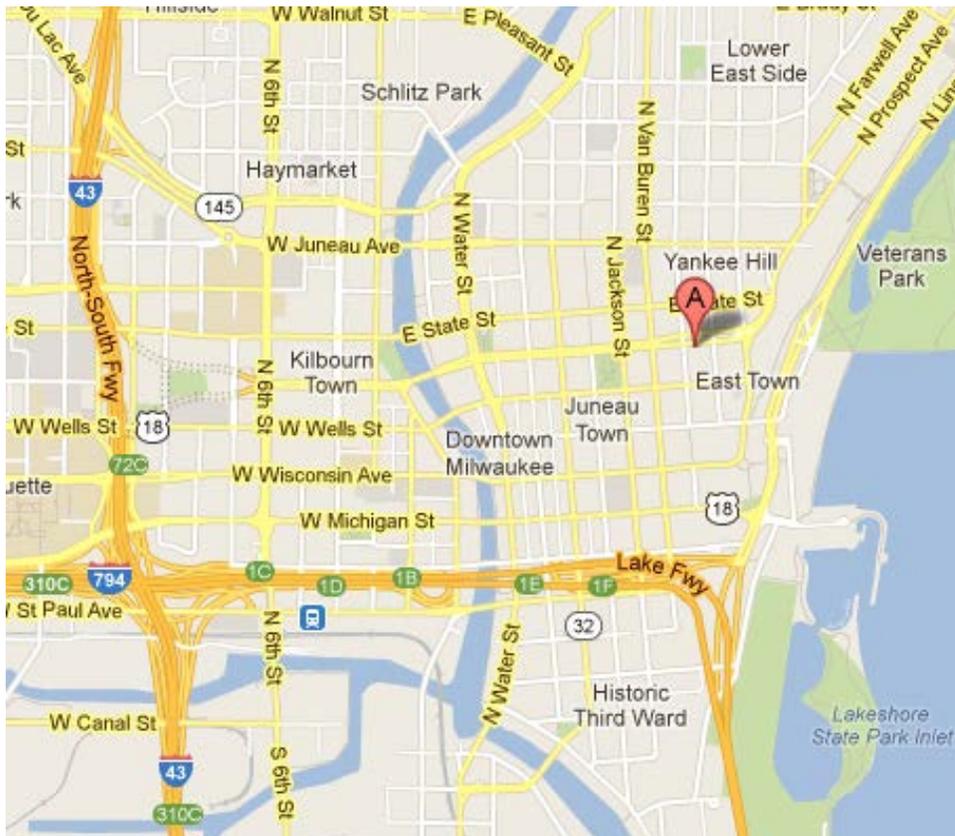
Discussion Topics: same as earlier

LeRoy Bessler

Discussion Topics: same as earlier

Map

Woman's Club of Wisconsin
813 East Kilbourn Avenue, Milwaukee, WI 53202
Telephone: 414-276-5170



The **Woman's Club of Wisconsin** is located at 813 East Kilbourn Avenue, at the intersection of East Kilbourn Avenue and North Cass Street. The Club entrance has a discreet marquee. (Handicapped entry is also available.)

The Club Parking Lot (guests pay no fee) is one block South, at the intersection of East Wells Street and North Cass Street.

Some Overnight Accommodation Alternatives Near the Conference Site:

University Club (Mention the conference to get our rate at this Club. Book early. Rooms are limited.)
414-271-2222 <http://universityclubmil.com/>

County Clare Irish Inn & Pub
414-272-5273 <http://countyclare-inn.com/>

Comfort Inn and Suites
800-328-7275 <http://www.parkeasthotel.com/>

Hotel Metro
877-638-7620 <http://www.hotelmetro.com/>

The Pfister Hotel
800-558-8222 <http://www.thepfisterhotel.com/>

Hyatt Regency
414-276-1234 or 888-591-1234 <http://milwaukee.hyatt.com/hyatt/hotels/>

Intercontinental Milwaukee
414-935-5943 or 800-954-4667 <http://www.intercontinentalmilwaukee.com/>

The Astor Hotel
800-558-0200 <http://theastorhotel.com/>

Registration & Payment Information and Optional Mailing List Form

SAS Users Conference – June 25, 2014 – Registration in Advance Only

Our online registration system allows us to accept credit cards or checks. If you pay by credit card, you will get a confirmation email and receipt when you complete your registration and successful payment has been received. If you prefer to pay by check, please fill in the online system, but select check payment and send a check to the address stated in the online system. You will receive a confirmation email when your check has been received.

Full-Time Students – You can register for \$25 if you are enrolled full-time at a degree-granting institution. You just need to email proof (student id) of your enrollment to registrar@wiilsu.org, and we will email you instructions on how to register at the \$25 rate.

If payment is not received by June 18, you will not be allowed to attend the conference.

Cancellations will not be accepted unless received before June 18. To cancel a registration, please email registrar@wiilsu.org stating that you wish to cancel, and we will issue the credit. If you pay by credit card and need to cancel, your credit card will be refunded less a \$10.00 processing fee (i.e., \$50.00 charge less \$10.00 fee results in a \$40.00 refund to your card). To avoid the processing fee, you can substitute someone else for your registration by going back into the registration system and editing your registration by changing your name to the new registrant.

Online Registration site: www.wiilsu.org

For questions about registration, contact our Registrars (David Bruckner or Craig Wildeman) at 920-457-4441 or registrar@wiilsu.org.

NOTE: Order of speakers on the agenda might need to change without notice.

Please Use This Section To Request Adds, Changes, or Deletions To Our Mailing List:

If you are not attending the conference and want to receive future mailings, please use this form to get on our mailing list. If you need to make corrections to our mailing list, please use this form. Please include your email address. Consider using one that is unlikely to change.

Name:

Company:

Address:

City:

State:

Zip:

Email:

Phone:

Check all that apply: Add to mailing list
 Change postal address

Add/change email address
 Delete from mailing list

Mail To: Software User Services, Inc.
177 Concord Dr.
Sheboygan Falls, WI 53085

Email To: registrar@wiilsu.org